(2) The transmitter must be equipped with a visual indicator or indicators such as neon tubes to show antenna circuit resonance. Failure of the indicator(s) must not keep the transmitter from operating.

(c) Portable survival craft receivers must meet the following requirements:

(1) The audio output must be one milliwatt with a signal to noise power ratio of at least 10 to 1, when the receiver is supplied through the following artificial antennas with the respective radio frequency signals:

Operating frequency, (kHz)	Signal strength (microvolts)	Modulation factor	Modulation (Hz)	Artificial antenna
500	25	0.3	400	10 ohms resistance and 100 picofarads capacitance.[1]
8364	100	0.3	400	40 ohms resistance.

[1] In the case of equipment approved prior to May 26, 1965, the artificial antenna may be 10 ohms resistance and 75 picofarads capacitance.

(2) The noise power present in the output of the receiver when the receiver is adjusted for A2A or H2A emission on 500 kHz and 8364 kHz must be determined with an unmodulated input signal of the indicated strength.

(d) The power supply must meet the following requirements:

(1) The source of power must be a manually operated electric generator capable of energizing the survival craft radio installation. The mechanical power applied to the crank handle(s) or the propelling lever(s) of the generator driving mechanism must not exceed a maximum of 0.15 horsepower for any operation of the survival craft radio installation at any temperature of the generator and its associated driving mechanism between minus 30 degrees and plus 50 degrees Celsius. Under these conditions the speed of rotation of the crank handle(s) must not be greater than 70 revolutions per minute nor must the cycles of operation of the propelling lever(s) be greater than 70 cycles per minute. The voltages applied to the radio installation must not vary from their normal values more than 20 percent at any generator speed in excess of the normal operating speed which can be manually developed.

(e) The antenna system must consist of a single wire antenna with a collapsible mast or a collapsible rod antenna conforming to the following requirements:

(1) The single wire antenna must be at least 12 meters (40 feet) of at least No. 10 AWG insulated extra-flexible stranded copper and include a means for fastening the wire to the antenna supports, and means for making electrical connection to the transmitter;

(2) Each totally enclosed lifeboat must be provided with a collapsible rod antenna which operates in either a freestanding position or supported only by a grommet in the canopy of the lifeboat. The antenna must be capable of being erected from within the enclosure. Antennas for use in totally enclosed lifeboats must be certificated.

(f) The grounding system must consist of either a conducting wire or plate to provide an efficient ground for the portable survival craft equipment. The conducting wire must consist of a length of not less than 6 meters (20 feet) of No. 10 AWG bare stranded copper or equivalent copper braid weighted at one end for immersion in the sea. The ground plate must consist of a bare plate or strips of corrosion resistant metal having a total area of at least .6 square meters (6.5 square feet) and must be located on the hull of the lifeboat below the waterline. The electrical connection to the grounding conductor or to the ground plate must be made from inside the lifeboat.

[51 FR 31213, Sept. 2, 1986, as amended at 63 FR 36606, July 7, 1998]

EFFECTIVE DATE NOTE: At 68 FR 46966, Aug. 7, 2003, §80.265 was removed effective October 6, 2003.

§ 80.267 Requirements for survival craft nonportable radio equipment.

(a)(1) The radio transmitter must meet the following requirements:

Operating frequency (kHz)	Frequency tolerance		Type of emission	Modulation percentages (average of modulation percentage of positive and negative peaks)	Modulation frequency	Average power output into specified artificial antenna	Artificial antenna
	Parts [1] in 10^6	HZ [2]					
500	5,000	20	A2A and A2B or H2A and H2B.	Not less than 70	Not less than 450 nor greater than 1350 Hertz.	Not less than 30 watts.	10 ohms resistance and 100 picofarads capacitance.
8364	200	50	A2A or H2A ldes.	.....do	.....do	Not less than 40 watts.	40 ohms resistance.

[1] For equipment approved before November 30, 1977.
[2] For equipment approved after November 29, 1977.

(2) The transmitter must have an antenna current meter.

(b) Survival craft non-portable receivers must meet the following requirements:

(1) The audio output must be one milliwatt at a signal to noise power ratio of at least 10 to 1, when the receiver is supplied through the following artificial antennas with the respective radio frequency signals:

Operating frequency, (kHz)	Signal strength (microvolts)	Modulation factor	Modulation (Hz)	Artificial antenna
500	200	0.3	400	15 ohms resistance and 100 picofarads capacitance.
8364	1,000	0.3	400	40 ohms resistance.

(2) When the receiver is adjusted for A2A or H2A emission on 500 kHz and 8364 kHz the noise power present in the output of the receiver must be determined with an unmodulated input signal of the indicated strength;

(3) The audio output of the receiver must be capable of at least 8 dB above one milliwatt at the rated loan impedance.

[51 FR 31213, Sept. 2, 1986, as amended at 63 FR 36607, July 7, 1998]

EFFECTIVE DATE NOTE: At 68 FR 46966, Aug. 7, 2003, § 80.267 was removed effective October 6, 2003.

§ 80.269 Technical requirements for radiotelephone distress frequency watch receiver.

(a) The radiotelephone distress frequency watch receiver is comprised of a receiver, a loudspeaker and a radiotelephone auto alarm device.

(b) The radiotelephone distress frequency watch receiver must meet the following requirements:

(1) The receiver must be capable of being switched to 2182 kHz and of receiving signals of at least A2A, A2B, H2A and H2B emissions;

(2) The receiver sensitivity must provide a SINAD of 20 dB at the audio output when a 30 microvolt signal with A2A, A2B, H2A, or H2B emission modulated 30% at 400 Hz is applied to the receiver RF terminals;

(3) The audio output of the receiver must be at least 50 milliwatts at the rated load impedance;

(4) The receiver must be provided with an auto alarm device which mutes the receiver (silences the loudspeaker) unless the radiotelephone alarm signal or the signal preceeding a vital navigational warning is received. When the auto alarm is activated the receiver audio output level must be louder than the output level of the received speech signal. Additionally, the receiver must meet the following requirements:

(i) When the receiver is muted its audio output power must be less than 1 milliwatt;

(ii) If tone filters are used to process the 1300 Hz and 2200 Hz tones the tolerance of their center frequency must be ±1.5 percent of the alerting frequency. The response must be flat within 6 dB to ±3% of the center frequency of the filters; and

(iii) The receiver must not be unmuted by atmospherics or by strong signals other than the radiotelephone